IWG-1
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Ref: Resolution 221
US WP-8F/79

UNITED STATES

CONTRIBUTION ON A NEW COORDINATION PROCEDURE NEEDED FOR HAPS AS PER RESOLTION 221

1. Background:

Resolution 221 from WRC-2000 resolves that for the purpose of protecting certain stations operating within IMT-2000 in neighboring countries from co-channel interference, a HAPS operating as a base station to provide IMT-2000 shall not exceed a provisional co-channel power flux-density (pfd) of -121.5 dBW/m2/MHz at the Earth's surface outside an administration's borders, unless agreed otherwise by the administration of the affected neighboring country. New procedures will need to be incorporated in the Radio Regulations to allow for the coordination of a HAPS platform operating as a base station with these neighboring Administrations.

2. Discussion:

This contribution proposes the concept of a new coordination procedure to allow for the coordination of a HAPS platform in the 2 GHz band[1].

ITU-R studies have shown that co-channel sharing of HAPS with mobile and the point-to-point fixed service is possible provided that there is sufficient geographical separation such that the co-channel interference power flux density from HAPS does not exceed the provisional coordination trigger at the border of a neighboring Administration.

One possible method could be to define a coordination area around the nadir point of a HAPS station using the coordination trigger to define the coordination area. The horizontal distance from the nadir point where the HAPS station produces the coordination trigger limit of -121.5 dBW/m2/MHz could define the area. Coordination with another Administration would then be triggered if the territory of a neighboring administration lies within the coordination area.

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[1] In accordance with No. **S5.BB**B, HAPS may be used as base stations within the terrestrial component of IMT-2000 in the bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz in Regions 1 and 3 and 1 885-1 980 MHz and 2 110-2 160 MHz in Region 2; the use by IMT-2000 applications using HAPS as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations.

It is recognized that additional ITU-R study is underway to determine the compatibility of HAPS within IMT-2000 with some other services that share small portions of these bands on a co-primary basis. Canada is currently conducting a study to determine the compatibility of HAPS within IMT-2000 with MMDS in the 2150-2160 MHz band in Region 2. Therefore, the impact of the provisional limits on the operation of MMDS systems is not clear at this time.

3. Conclusion

The US would like to obtain comment and feedback on this approach before pursuing it any further. One question we would like addressed is exactly where in the Radio Regulations would we put a new procedure for the coordination of two terrestrial systems?